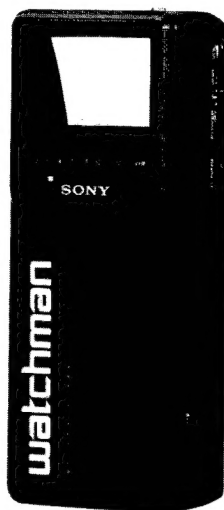


FD-2E

SERVICE MANUAL

*AEP Model
E Model*



SPECIFICATIONS

TV system	CCIR (B, G)
Channel coverage	VHF channels 2-12 UHF channels 21-68
Antenna	VHF/UHF telescopic antenna
Picture tube	2-inch picture measured diagonally
Input	EXT ANT: minijack, 75 ohms
Output	EAR: stereo minijack impedance 8-300 ohms
Power requirement	6 V DC: Four R6 or LR6 batteries Insert into the battery compartment. House current E model: 110-240 V AC Use the supplied AC power adaptor. AEP model: 220 V AC Use the AC-D4 AC power adaptor (optional). Four R14 or LR14 batteries Insert into the EBP-6 auxiliary battery case (optional). Car battery (12V DC) Use the DCC-127A car battery cord (optional).

Power consumption	1.6 W (6 V DC)
Dimensions	Approx. 64.3×156.6×41.5 mm (w/h/d) (2 ⁵ / ₈ ×6 ¹ / ₄ ×1 ¹¹ / ₁₆ inches) incl. projecting parts and controls
Weight	Approx. 410 g (14.5 oz) incl. batteries


FEATURES

- Miniature black and white TV for portable or tabletop use.
- Auto Fine Tuning circuit enables precise tuning.
- Longer alkaline battery life provides approximately 5 hours of continuous enjoyment.
- 4-way power source capability allows use in any situation.
- SOUND position enables listening to the TV audio only.
- External antenna input for superior reception inside the home or car.

Battery life

	Battery	Life (hrs.)
Battery compartment	Sony New Super SUM-3 (NS)	approx. 1.5
	Sony Eveready alkaline AM3	approx. 5
Battery case	Sony New Super SUM-2 (NS)	approx. 6
	Sony Eveready alkaline AM2	approx. 14

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

FLAT BLACK AND WHITE TV
SONY®



Replacing chip components

All chip components should be connected and disconnected, using a tapered soldering iron [temperature of the iron tip: less than 280°C (536°F)], a pair of tweezers and braided wire.

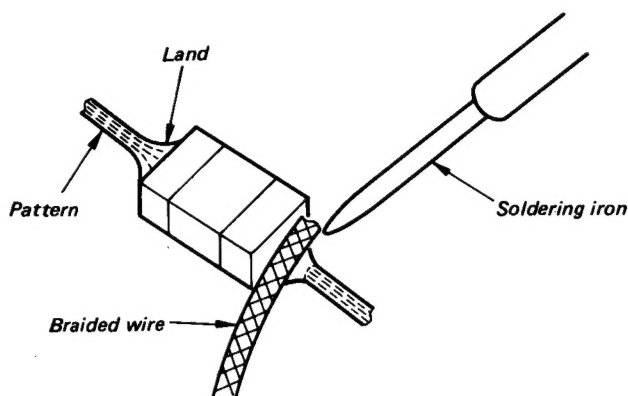
Precautions for replacement

1. Do not disconnect the chip component forcefully. Otherwise, the pattern may peel off.
2. Never re-use a disconnected chip component. Dispose of all old chip components.
3. To protect the chip component, heating time for attaching the component should be within 3 seconds.

○ Removing chip components

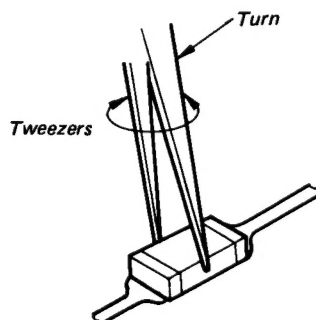
(1) Removing solder at electrode

Remove the solder at the electrode, using a thin braided wire. Do not remove the solder of the part (chip component) attached adjacent to the electrode.



(2) Disconnecting chip components

Turn the tweezers with the soldering iron alternately applied to both electrodes, and the chip component will be disconnected. Take careful precautions while disconnecting, because if the chip component is forcefully removed the land may peel off. Never re-use a disconnected chip component.



(3) Smoothing the soldered surface

After disconnecting the chip component, remove the solder by using a braided wire to smooth the land surface.

○ Connecting chip components

The value of chip components is not displayed on the main body. Take due precautions to avoid mixing new chip components with other ones.

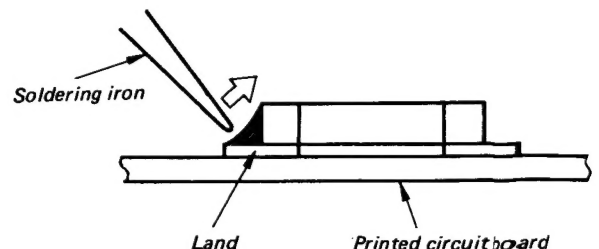
(1) Applying solder to land on one side

Apply a thin layer of solder to the land on one side where the chip component is to be connected. Too much solder may cause bridging.



(2) Speedy soldering

Hold the chip component at the desired position, using tweezers, and apply the soldering iron in the arrow-marked direction. To protect the chip component, heating time should be within 3 seconds.



(3) Speedy soldering of electrode on the other side

Solder the electrode on the other side in the same way as in (2) above.

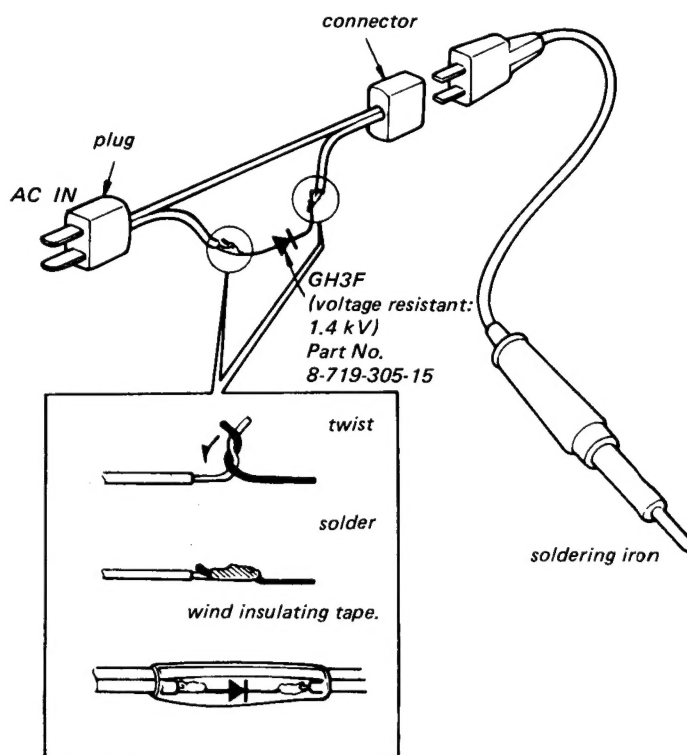
Flexible Circuit Board Repairing

1. Keep the temperature of the soldering iron at $270^{\circ} \pm 10^{\circ}\text{C}$ during repairing.
You can maintain the temperature of the soldering iron around 270°C by using the thermal controller as illustrated on the right.
2. Do not touch the soldering iron more than 4 seconds or 3 times on the same conductor of the circuit board.
3. Do not apply force on the conductor when soldering or unsoldering.

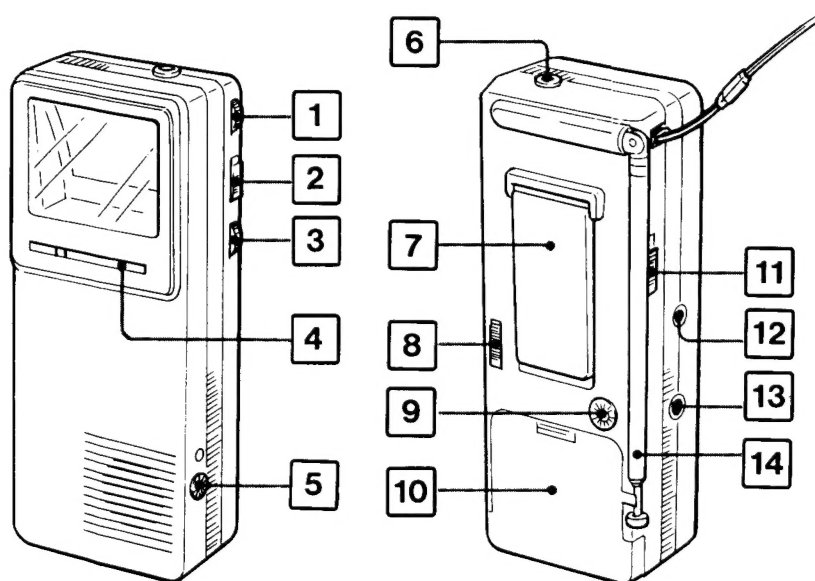
Tip of soldering iron



To make thermal controller of soldering iron



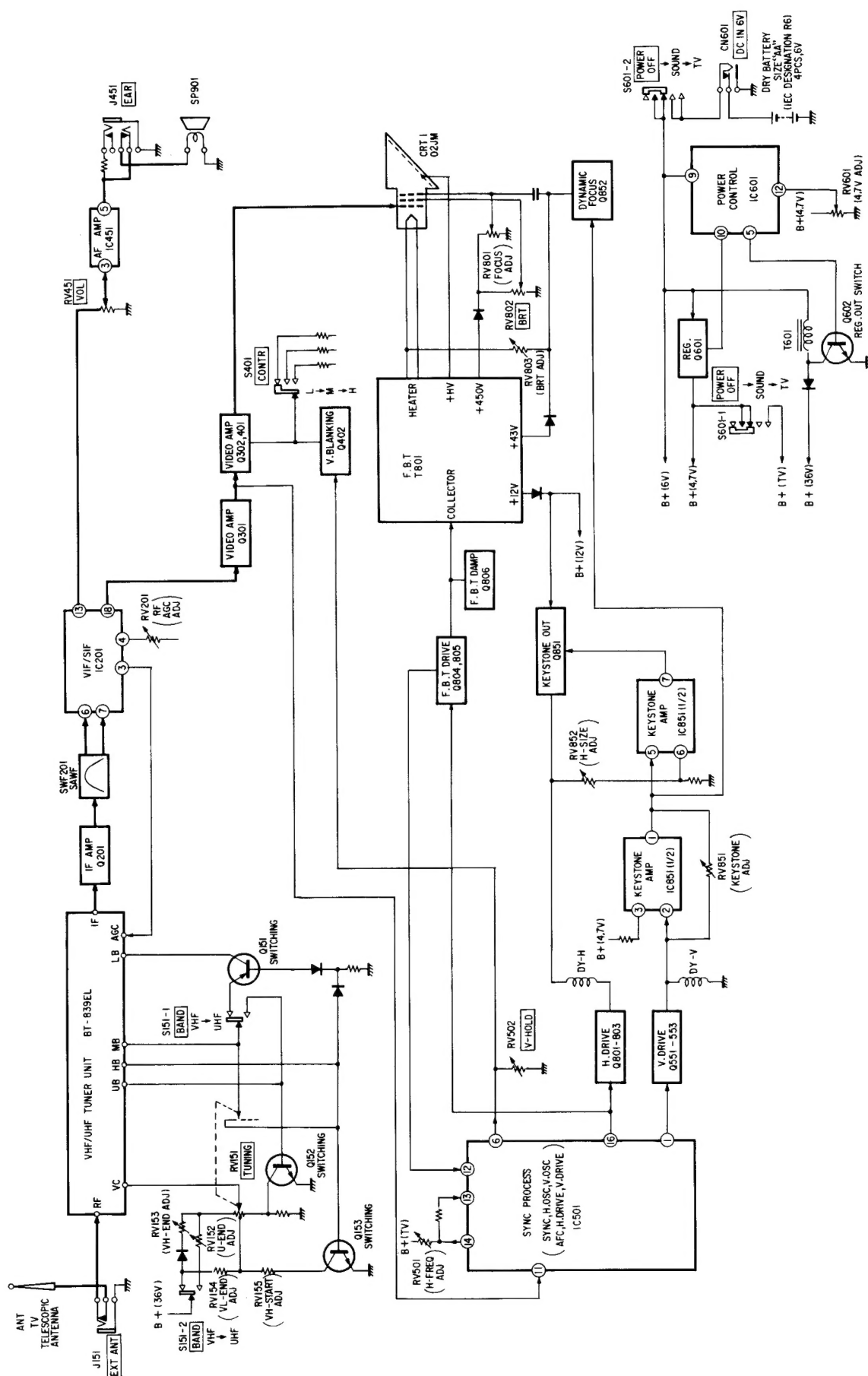
PARTS IDENTIFICATION



- | | |
|----|--------------------------------------|
| 1 | VOL (volume) control |
| 2 | POWER switch |
| 3 | TUNING control |
| 4 | Dial scale |
| 5 | BRT (brightness) control |
| 6 | EXT ANT (external antenna) jack |
| 7 | Stand |
| 8 | BAND switch |
| 9 | V (vertical) HOLD control |
| 10 | Battery compartment |
| 11 | CONTR (contrast) switch |
| 12 | EAR (earphone) jack |
| 13 | DC IN 6V (external power input) jack |
| 14 | Telescopic antenna |

SECTION 1

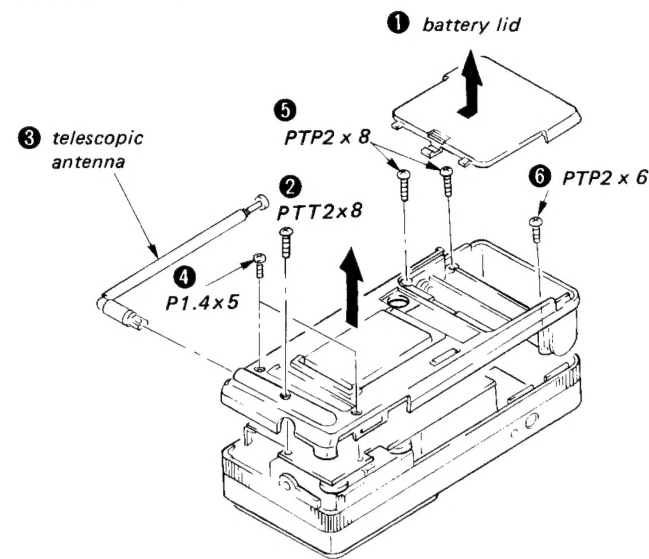
BLOCK DIAGRAM



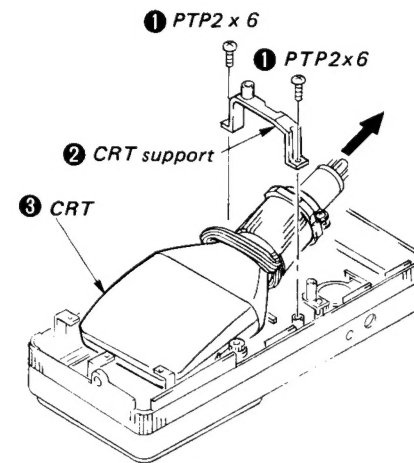
SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in numerical order given.

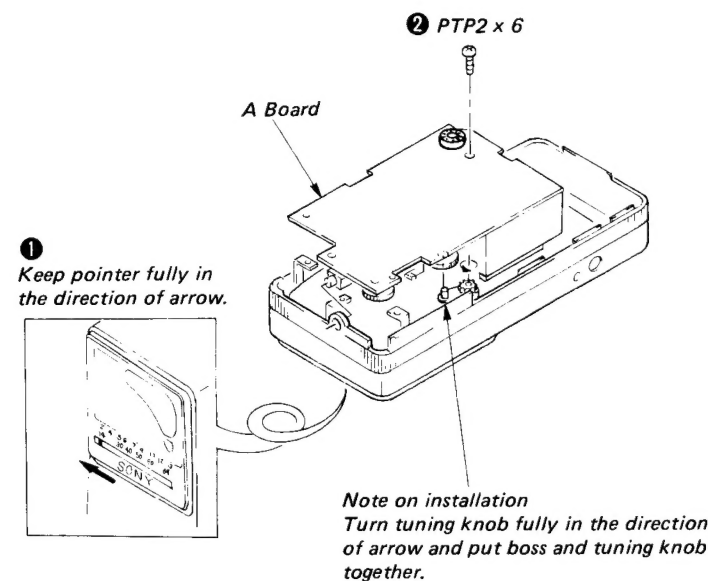
CABINET REAR



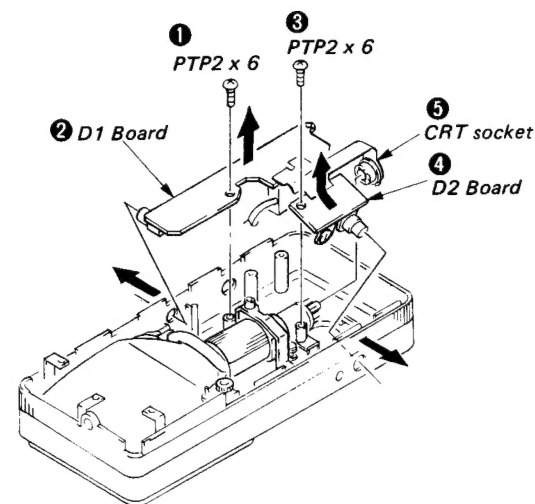
CRT



A BOARD



D1 BOARD, D2 BOARD



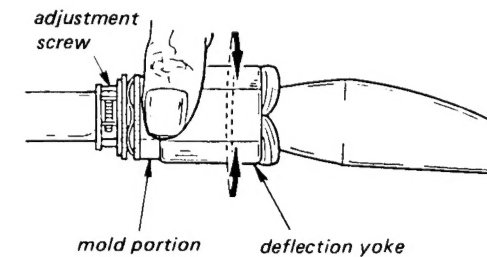
SECTION 3 ADJUSTMENTS

1. Test Equipment Required
 - regulated power supply
 - color-bar/pattern generator
 - digital voltmeter
 - VTVM
2. Input Signal
a cross-hatch, a color-bar or an off-air signal.
3. These adjustment should be performed with 6V dc unless otherwise noted.

Horizontal Alignment Adjustment

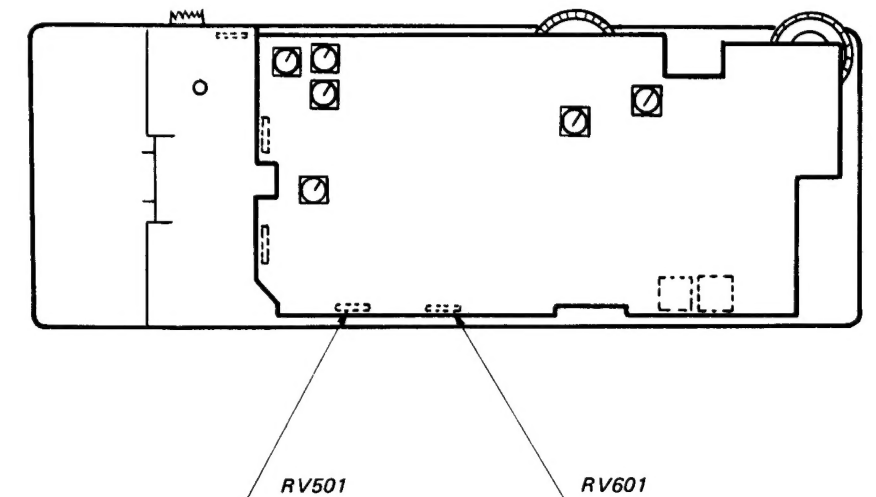
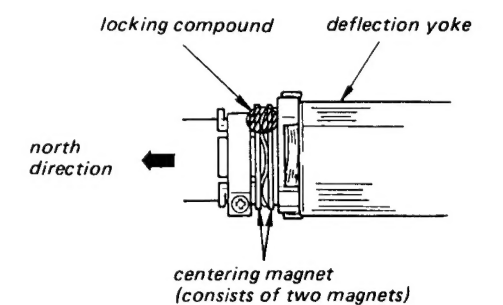
1. Loosen the adjustment screw.
2. Tune in an off-air signal and adjust deflection yoke for optimum picture.
3. Tighten the screw after the adjustment.

Note: When making the adjustment, turn the deflection yoke while holding the mold portion together with yoke.



Centering Adjustment

1. Turn the socket of CRT toward the north.
2. Tune in an off-air signal.
3. Adjust the centering magnet so that the picture is in the center.



Horizontal Frequency Adjustment

1. Connect terminal (10) and (11) of IC501.
2. Tune in an off-air signal and adjust RV501 for stable picture.

4.7V Adjustment

Adjust RV601 for 4.7V reading on collector of Q601.

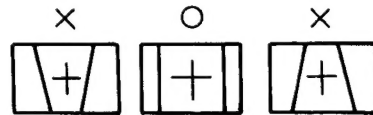
Focus Adjustment

1. Set the regulated dc power supply voltage to 4.5V.
2. Adjust RV801 for the best focus at the center of the picture.

RV801

Keystone Correction (KEYST) Adjustment

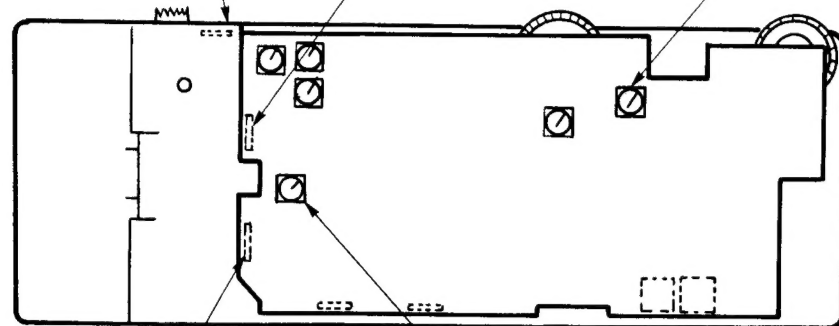
1. Tune in an off-air signal.
2. Adjust RV851 for optimum picture.

***RV851***

RF AGC Adjustment

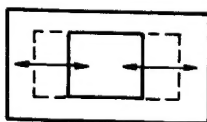
1. Tune in an off-air signal.
2. Adjust RV201 so that snow noise disappears from the picture.

RV201

**RV852**

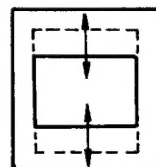
Horizontal Amplitude (H-SIZE) Adjustment

1. Tune in an off-air signal.
2. Adjust RV852 for the best horizontal amplitude.



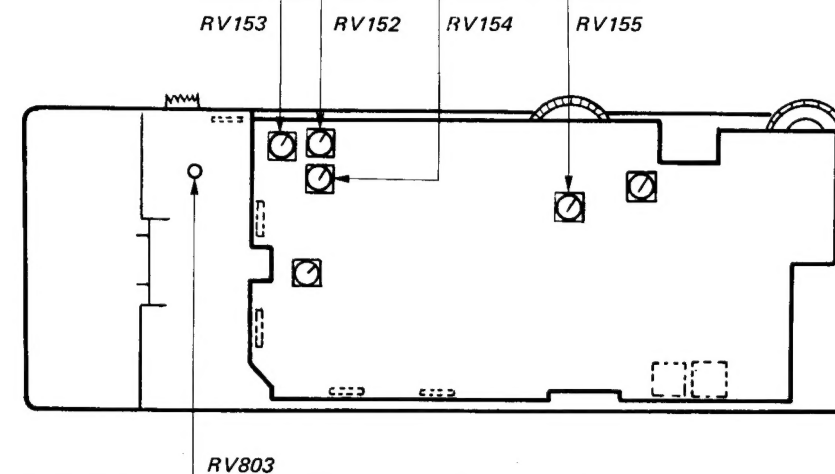
Vertical Amplitude (V.SIZE) Adjustment

1. Tune in an off-air signal.
2. Adjust RV551 for the best vertical amplitude.



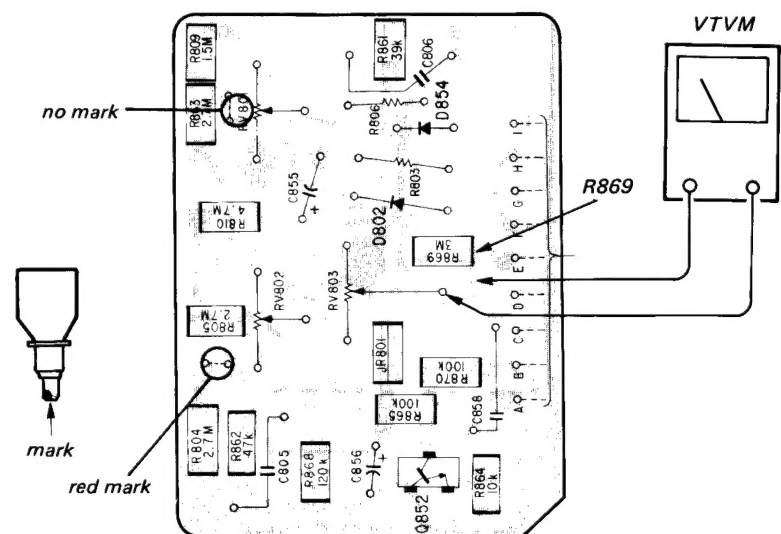
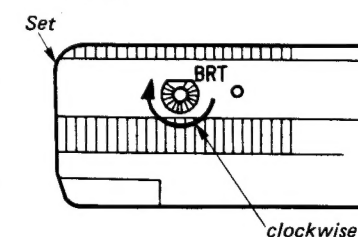
Channel Display Adjustment

1. Set the BAND switch to VHF.
2. Turn the TUNING knob, set the dial pointer to the number "4" on dial scale.
3. Adjust RV154 for the best focus at the center of the picture.
4. Turn the TUNING knob, set the dial pointer to the number "5" on dial scale.
5. Adjust RV155 for the best focus at the center of the picture.
6. Set the dial pointer to the number "12" on dial scale.
7. Adjust RV153 for the best focus at the center of the picture.
8. Tune in to an off-air signal of 7-11 ch and confirm that the pointer stands at specified channel.
9. Tune in to an off-air signal of 2 and 3 ch and confirm that the pointer stands at specified channel.
10. Set the BAND switch to UHF and set the dial pointer to the number "68" on dial scale.
11. Adjust RV152 for the best focus at the center of the picture.
12. Tune in to an off-air signal near 30 ch and confirm that the signal is tuned between 30 ± 3 ch.

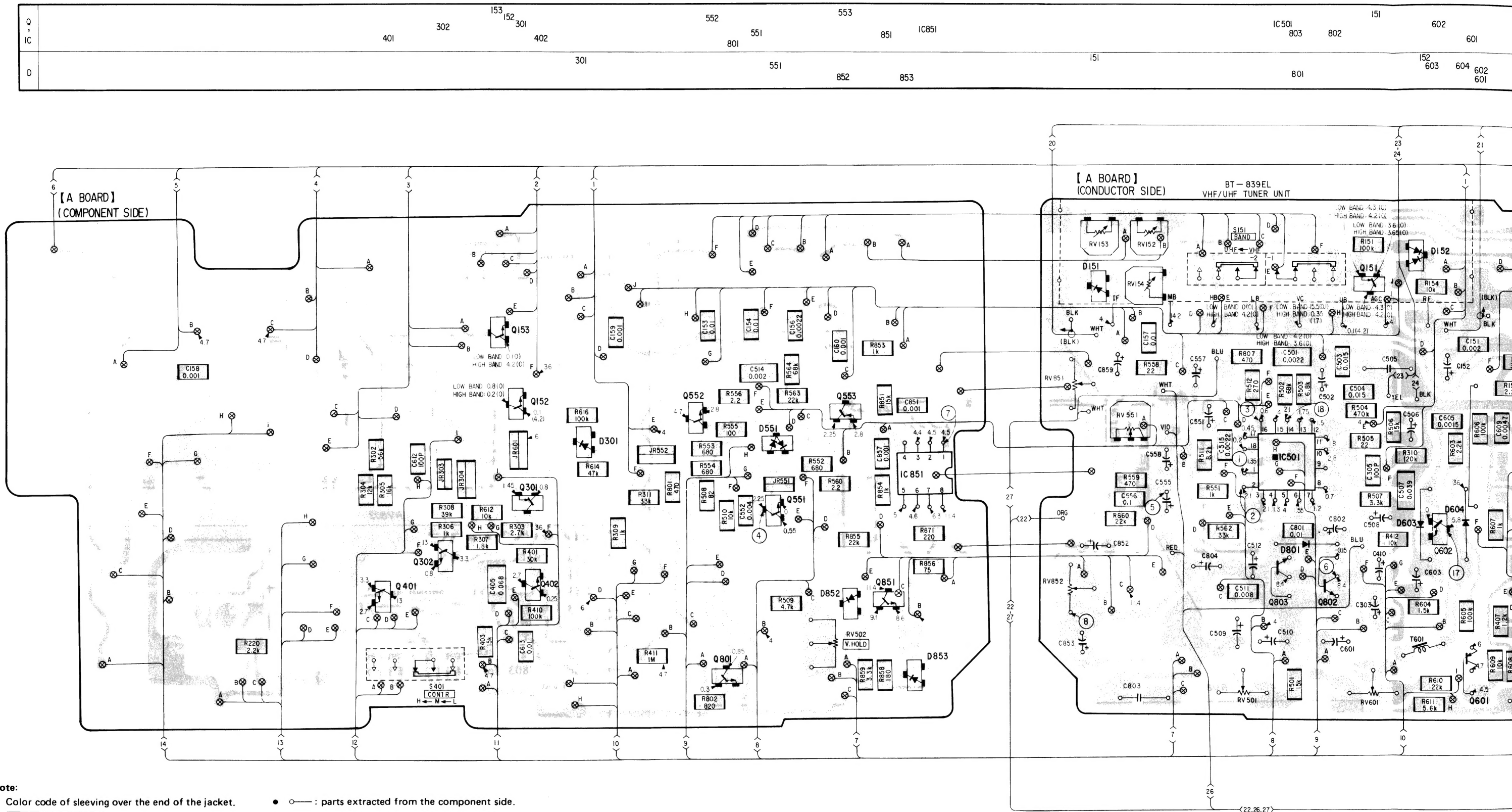


Luminance (BRT) Adjustment


1. Set CONTR switch (S401) to "L" position.
2. Bridge the pattern as shown at right according to the mark on the neck of the picture tube.
3. Turn BRT knob fully clockwise.
4. Connect a VTVM across R869 and adjust RV803 for 24.6V reading on VTVM.

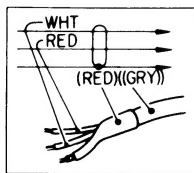


4-1. MOUNTING DIAGRAM • Refer to page 16 for semiconductor lead layouts.

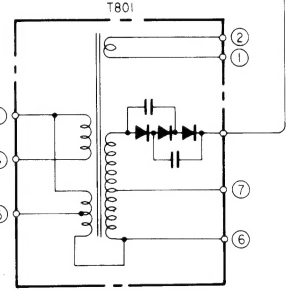


Note:

- Color code of sleeving over the end of the jacket.
- 
- — : parts extracted from the component side.
 - — : parts extracted from the conductor side.
 - : part mounted on the conductor side.
 - → : indicates side identified with part number.
 - ⊗ : Through hole.
 - : B + pattern



A
B
C
D
E
F
G
H
I
J



A

B

C

D

E

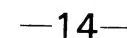
F

G

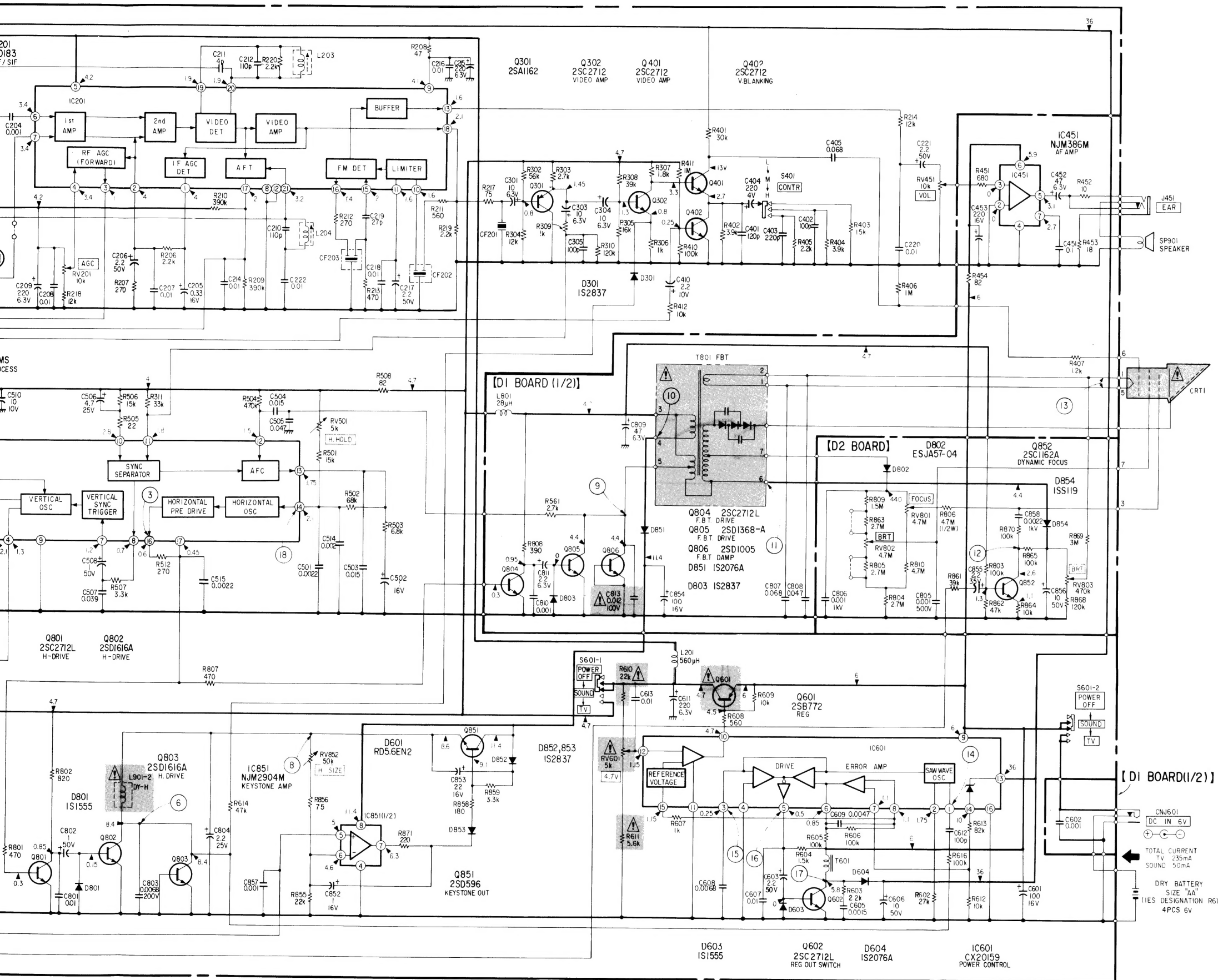
H

I



J




and page 19 for waveforms.



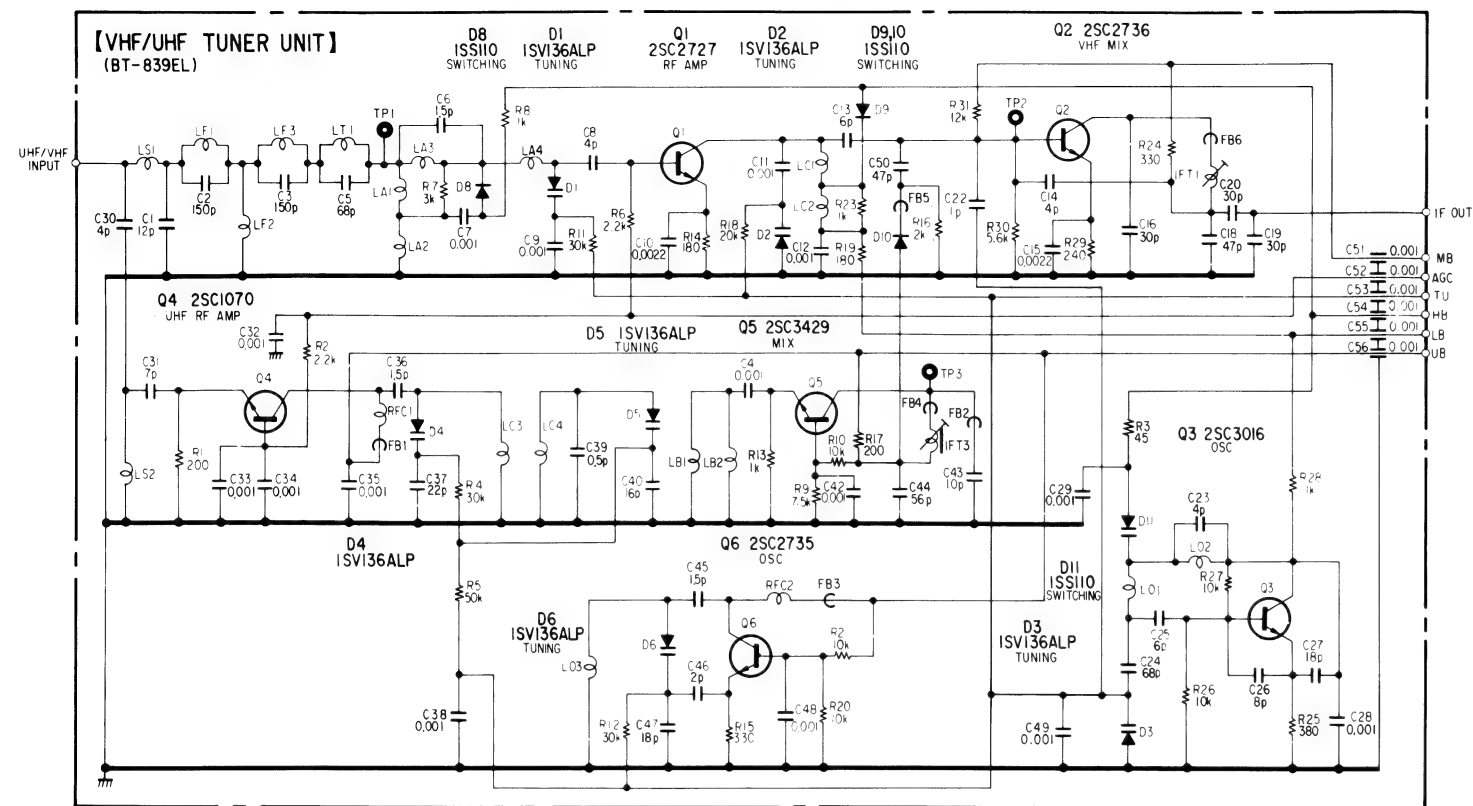
Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
 - Δ : internal component.
 -  : B+ bus.
 -  : adjustment for repair.
 - Voltages are dc with respect to ground unless otherwise noted.
 - Readings are taken under detuned conditions with a VOM (50 $\text{k}\Omega/\text{V}$).
- no mark : VHF
() : UHF
- Waveforms are taken under no-signal conditions by using oscilloscope.
- Voltage variations may be noted due to normal production tolerances.
- Switch

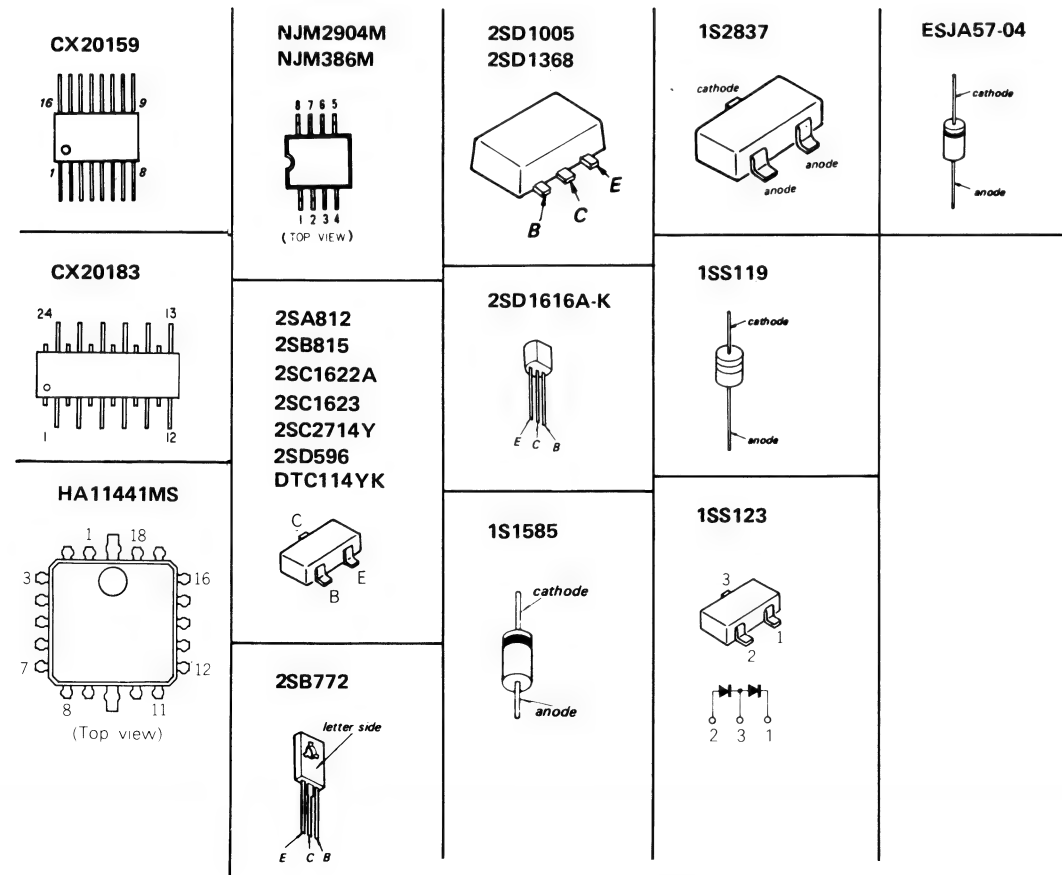
Ref. No.	Switch	Position
S151	BAND	VHF
S401	CONTR	L
S601	POWER	OFF

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

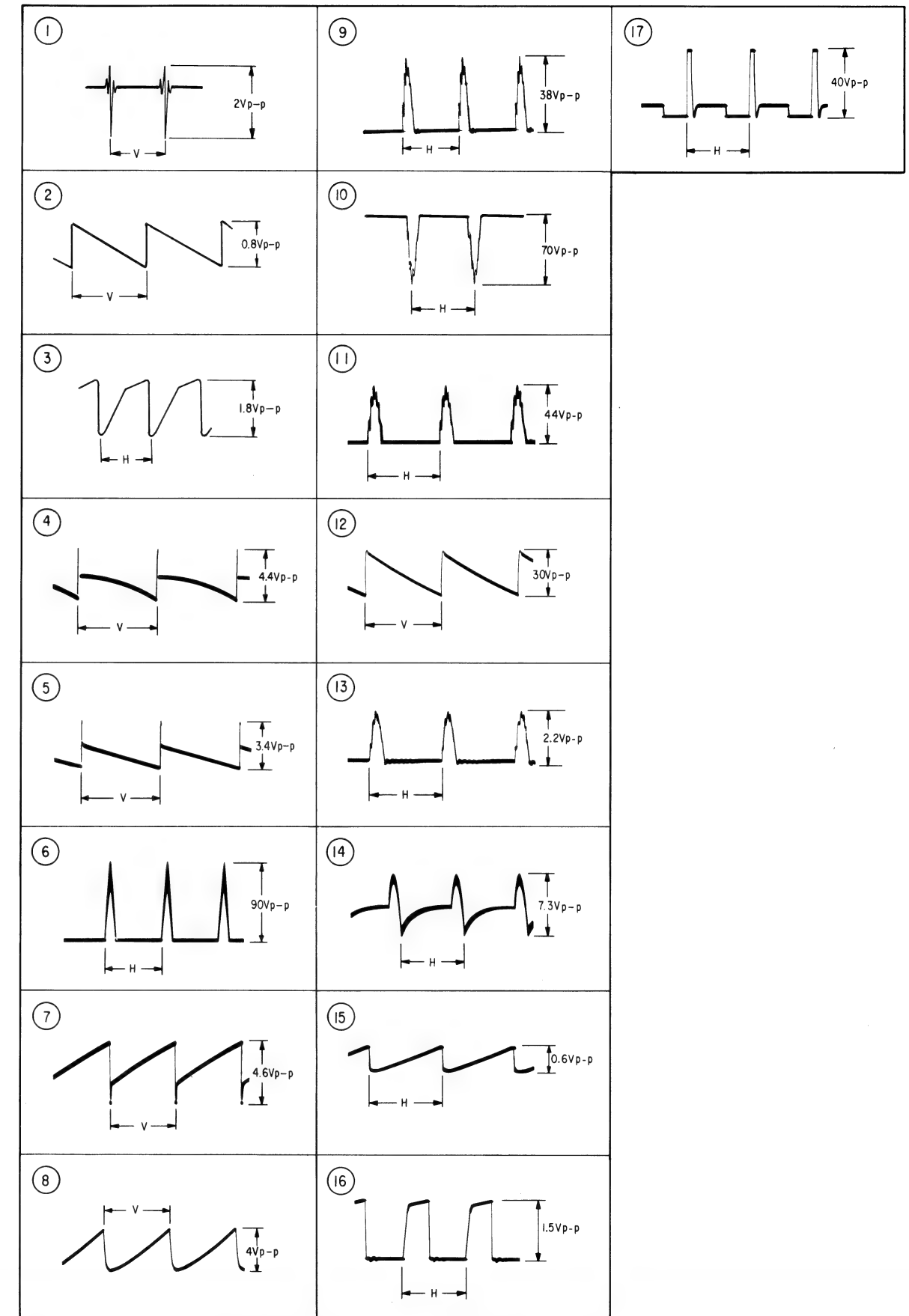
4-3. VHF/UHF TUNER UNIT SCHEMATIC DIAGRAM



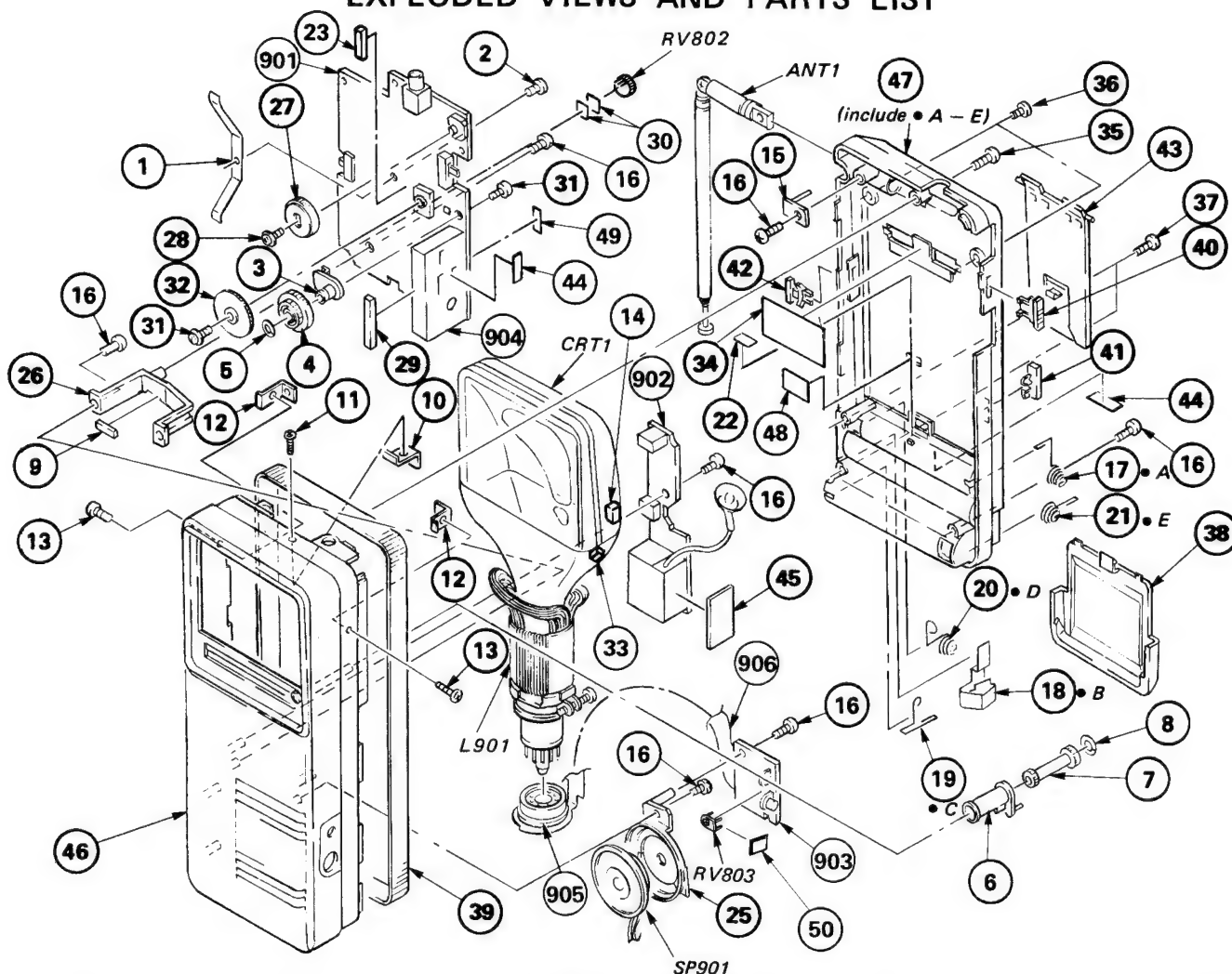
● Semiconductor Lead Layouts



● Waveforms



SECTION 5 EXPLODED VIEWS AND PARTS LIST



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	*3-329-414-01	PLATE, CONTACT, GROUND		35	7-685-784-04	(WHT).....SCREW +PTT 2X8 (S)	
2	3-703-502-21	SCREW			7-685-784-09	(BLK,GRY)...SCREW +PTT 2X8 (S)	
3	3-329-424-01	TUNING BLOCK		36	3-318-202-21	(WHT).....SCREW (M1.4X5), TAPPING	
4	3-329-427-01	KNOB, TUNING			3-318-202-31	(BLK,GRY)...SCREW (M1.4X5), TAPPING	
5	3-329-411-01	WASHER, STOPPER		37	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	
6	*3-329-435-01	RETAINER, SHAFT, TUNING		38	3-329-432-01	(GRY)...LID, BATTERY CASE	
7	3-329-403-01	SHAFT, TUNING			3-329-432-11	(BLK)...LID, BATTERY CASE	
8	3-329-410-01	WASHER, STOPPER			3-329-432-21	(WHT)...LID, BATTERY CASE	
9	3-545-659-00	CUSHION, SPEAKER		39	3-329-401-01	STRIP, ORNAMENTAL	
10	*3-329-419-01	BRACKET, ANT		40	3-329-423-01	KNOB, POWER SW	
11	7-627-553-27	SCREW, PRECISION +P 2X2.5		41	3-329-408-01	KNOB, CONTRAST	
12	*3-329-416-01	PLATE, NUT		42	3-324-504-01	KNOB, ISS	
13	7-627-850-07	SCREW, PRECISION +P 1.4X2		43	3-314-029-13	(BLK)...STAND	
14	3-309-009-00	SPACER, MOTOR			3-314-029-61	(GRY)...STAND	
15	*X-3329-402-1	BRACKET ASSY, STRAP			3-314-029-81	(WHT)...STAND	
16	7-685-104-14	SCREW +P 2X6 TYPE2 NON-SLIT		44	3-527-213-00	LABEL, SERIAL NUMBER	
17	3-564-973-00	SPRING (B)		45	*3-314-056-00	INSULATOR	
18	3-329-431-01	BOARD, TERMINAL, BATTERY			X-3329-422-1	(GRY)...FRONT CABINET ASSY	
19	3-329-412-01	TERMINAL, PLUS		46	X-3329-424-1	(BLK)...FRONT CABINET ASSY	
20	3-329-415-01	TERMINAL, MINUS			X-3329-425-1	(WHT)...FRONT CABINET ASSY	
21	3-329-413-01	SPRING		47	X-3329-423-1	(GRY)...REAR CABINET ASSY	
22	3-831-441-11	CUSHION (B)			X-3329-426-1	(WHT)...REAR CABINET ASSY	
23	9-911-845-XX	SPACER (D)			X-3329-427-1	(BLK)...REAR CABINET ASSY	
25	*3-329-430-01	HOLDER, SP		48	3-314-066-00	SHEET (B), PROTECTION	
26	*3-329-404-01	SUPPORT, CRT		49	3-327-119-01	SPACER	
27	3-329-428-01	KNOB, VOLUME		50	3-572-862-11	SPACER	
28	3-703-502-41	SCREW		901	A-3017-135-A	PC BOARD ASSY, A	
29	9-911-815-01	CUSHION, MICROPHONE		902	*A-3017-136-A	PC BOARD ASSY, D1	
30	9-911-863-XX	SPACER (V)		903	*A-3017-130-A	PC BOARD ASSY, D2	
31	3-318-203-71	SCREW (B1.7X5), TAPPING		904	1-463-651-11	TUNER UNIT (BT-839EL)	
32	*3-329-426-01	GEAR, DRUM		905	1-526-736-00	SOCKET, CRT	
34	*3-314-065-00	SHEET (A), PROTECTION		906	1-616-744-11	PC BOARD, (C) FLEXIBLE	

SECTION 6 ELECTRICAL PARTS LIST

NOTE:

Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

All resistors are in ohms.
F : nonflammable

COILS


MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA....: μA..., UPA....: μPA..., UPC....: μPC,

UPD....: μPD...

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
901	A-3017-135-A	PC BOARD ASSY, A		
902	★A-3017-136-A	PC BOARD ASSY, D1		
903	★A-3017-130-A	PC BOARD ASSY, D2		
904	1-463-651-11	TUNER UNIT (BT-839EL)		
905	1-526-736-00	SOCKET, CRT		
906	1-616-744-11	PC BOARD, (C) FLEXIBLE		
ANT1	1-501-345-11	ANTENNA, FERRITE-ROD		
C151	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C152	1-124-224-00	ELECT 47MF	20%	6.3V
C153	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C154	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C155	1-123-617-00	ELECT 10MF	20%	16V
C156	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C157	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C158	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C159	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C160	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C202	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C203	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C204	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C205	1-131-454-00	TANTALUM 0.33MF	20%	16V
C206	1-124-257-00	ELECT 2.2MF	20%	50V
C207	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C208	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C209	1-124-635-00	ELECT 220MF	20%	6.3V
C210	1-163-118-00	CERAMIC CHIP 110PF	5%	50V
C211	1-163-087-00	CERAMIC CHIP 4PF	0.25PF	50V
C212	1-163-118-00	CERAMIC CHIP 110PF	5%	50V
C214	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C215	1-124-635-00	ELECT 220MF	20%	6.3V
C216	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C217	1-123-612-00	ELECT 2.2MF	20%	50V
C218	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C219	1-163-103-00	CERAMIC CHIP 27PF	5%	50V
C220	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C221	1-123-612-00	ELECT 2.2MF	20%	50V
C222	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C301	1-124-233-00	ELECT 10MF	20%	6.3V
C303	1-124-233-00	ELECT 10MF	20%	6.3V
C304	1-124-233-00	ELECT 10MF	20%	6.3V
C305	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C401	1-163-119-00	CERAMIC CHIP 120PF	5%	50V
C402	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C403	1-163-125-00	CERAMIC CHIP 220PF	10%	50V
C404	1-124-413-00	ELECT 220MF	20%	4V
C405	1-163-076-00	CERAMIC CHIP 0.068MF		50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description		
C410	1-131-419-00	TANTALUM 2.2MF	20%	10V
C451	1-163-077-00	CERAMIC CHIP 0.1MF		50V
C452	1-123-647-00	ELECT 47MF	20%	6.3V
C453	1-123-321-00	ELECT 220MF	20%	16V
C501	1-163-212-00	CERAMIC CHIP 0.002MF	5%	50V
C502	1-131-347-00	TANTALUM 1MF	20%	16V
C503	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V
C504	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V
C505	1-136-365-00	FILM 0.047MF	5%	50V
C506	1-124-245-00	ELECT 4.7MF	20%	25V
C507	1-163-079-00	CERAMIC CHIP 0.039MF	10%	25V
C508	1-124-255-00	ELECT 1MF	20%	50V
C509	1-124-470-11	ELECT 470MF	20%	6.3V
C510	1-127-489-00	ELECT(SOLID) 10MF	20%	10V
C511	1-163-036-00	CERAMIC CHIP 0.068MF		50V
C512	1-131-347-00	TANTALUM 1MF	20%	16V
C514	1-163-212-00	CERAMIC CHIP 0.002MF	5%	50V
C515	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C551	1-124-222-00	ELECT 22MF	20%	6.3V
C552	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C555	1-124-413-00	ELECT 220MF	20%	4V
C556	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C557	1-131-422-00	TANTALUM 3.3MF	20%	6.3V
C558	1-124-413-00	ELECT 220MF	20%	4V
C601	1-124-168-00	ELECT 100MF	20%	16V
C602	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C603	1-124-257-00	ELECT 2.2MF	20%	50V
C605	1-163-145-00	CERAMIC CHIP 0.0015MF	10%	50V
C606	1-124-261-00	ELECT 10MF	20%	50V
C607	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C608	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V
C609	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C611	1-124-635-00	ELECT 220MF	20%	6.3V
C612	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C613	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C801	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C802	1-124-255-00	ELECT 1MF	20%	50V
C803	1-106-363-00	MYLAR 0.0068MF	5%	200V
C804	1-127-508-00	ELECT(SOLID) 2.2MF	20%	25V
C805	1-102-038-00	CERAMIC 0.001MF	99%	500V
C806	1-162-146-00	CERAMIC 0.001MF		1KV
C807	1-163-036-00	CERAMIC CHIP 0.068MF		50V
C808	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C809	1-127-486-00	ELECT(SOLID) 47MF	20%	6.3V
C810	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C811	1-135-099-00	TANTAL. CHIP 2.2MF	10%	6.3V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C813	△.1-106-198-00	MYLAR	0.012MF	5%	100V
C851	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C852	1-131-347-00	TANTALUM	1MF	20%	16V
C853	1-124-234-00	ELECT	22MF	20%	16V
C854	1-124-445-00	ELECT	100MF	20%	16V
C855	1-124-257-00	ELECT	2.2MF	20%	35V
C856	1-124-261-00	ELECT	10MF	20%	50V
C857	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C858	1-162-147-00	CERAMIC	0.0022MF		1KV
C859	1-131-383-00	TANTALUM	10MF	20%	6.3V
CF201	1-567-506-11	FILTER, CERAMIC			
CF202	1-567-566-11	FILTER, CERAMIC			
CF203	1-567-567-11	FILTER, CERAMIC			
CN601	1-562-961-11	JACK (DC IN 6V)			
CRT1	△.8-735-950-05	CRT 02JM(PS)			
D151	8-719-100-05	DIODE 1S2837			
D152	8-719-100-05	DIODE 1S2837			
D301	8-719-100-05	DIODE 1S2837			
D551	8-719-101-23	DIODE 1SS123			
D603	8-719-911-19	DIODE 1SS119			
D604	8-719-815-85	DIODE 1S1585			
D801	8-719-911-19	DIODE 1SS119			
D802	8-719-903-28	DIODE ESJA57-04			
D803	8-719-100-05	DIODE 1S2837			
D851	8-719-815-85	DIODE 1S1585			
D852	8-719-100-05	DIODE 1S2837			
D853	8-719-100-05	DIODE 1S2837			
D854	8-719-911-19	DIODE 1SS119			
IC201	8-759-602-99	IC CX20183			
IC451	8-759-700-50	IC NJM386M			
IC501	8-759-303-42	IC HA11441MS			
IC601	8-759-802-39	IC CX20159			
IC851	8-759-701-01	IC NJM2904M			
J151	1-507-814-21	JACK, ANTENNA (EXT ANT)			
J451	1-562-967-11	JACK (EAR)			
JR201	1-216-295-00	METAL CHIP	0	5%	1/10W
JR202	1-216-296-00	METAL CHIP	0	5%	1/8W
JR303	1-216-295-00	METAL CHIP	0	5%	1/10W
JR304	1-216-296-00	METAL CHIP	0	5%	1/8W
JR452	1-216-295-00	METAL CHIP	0	5%	1/10W
JR453	1-216-296-00	METAL CHIP	0	5%	1/8W
JR455	1-216-295-00	METAL CHIP	0	5%	1/10W
JR456	1-216-295-00	METAL CHIP	0	5%	1/10W
JR457	1-216-295-00	METAL CHIP	0	5%	1/10W
JR551	1-216-295-00	METAL CHIP	0	5%	1/10W
JR552	1-216-296-00	METAL CHIP	0	5%	1/8W
JR601	1-216-296-00	METAL CHIP	0	5%	1/8W
JR801	1-216-295-00	METAL CHIP	0	5%	1/10W
L201	1-408-098-00	MICRO INDUCTOR 560UH			
L202	*1-422-258-11	COIL, AIR-CORE			
L203	1-404-633-11	COIL, VIF DETECTOR			
L204	1-404-633-11	COIL, VIF DETECTOR			
L801	1-421-549-00	COIL, CHOKE 28UH			
L901	△.1-451-276-11	DEFLECTION YOKE			
Q151	8-729-100-76	TRANSISTOR 2SA812			
Q152	8-729-900-52	TRANSISTOR DTC114YK			
Q153	8-729-900-52	TRANSISTOR DTC114YK			
Q201	8-729-200-87	TRANSISTOR 2SC2714-Y			

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q301	8-729-100-76	TRANSISTOR 2SA812			
Q302	8-729-100-66	TRANSISTOR 2SC1623			
Q401	8-729-100-66	TRANSISTOR 2SC1623			
Q402	8-729-100-66	TRANSISTOR 2SC1623			
Q551	8-729-159-64	TRANSISTOR 2SD596			
Q552	8-729-159-64	TRANSISTOR 2SD596			
Q553	8-729-800-68	TRANSISTOR 2SB815			
Q601	△.8-729-177-23	TRANSISTOR 2SB772			
Q602	8-729-100-66	TRANSISTOR 2SC1623			
Q801	8-729-100-66	TRANSISTOR 2SC1623			
Q802	8-729-111-29	TRANSISTOR 2SD1616A-K			
Q803	8-729-111-29	TRANSISTOR 2SD1616A-K			
Q804	8-729-100-66	TRANSISTOR 2SC1623			
Q805	8-729-301-25	TRANSISTOR 2SD1368			
Q806	8-729-103-72	TRANSISTOR 2SD1005			
Q851	8-729-159-64	TRANSISTOR 2SD596			
Q852	8-729-103-16	TRANSISTOR 2SC1622A			
R151	1-216-097-00	METAL CHIP	100K	5%	1/10W
R154	1-216-073-00	METAL CHIP	10K	5%	1/10W
R157	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R158	1-216-108-00	METAL CHIP	300K	5%	1/10W
R159	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R161	1-216-045-00	METAL CHIP	680	5%	1/10W
R162	1-216-091-00	METAL CHIP	56K	5%	1/10W
R201	1-216-037-00	METAL CHIP	330	5%	1/10W
R202	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R203	1-216-041-00	METAL CHIP	470	5%	1/10W
R205	1-216-049-00	METAL CHIP	1K	5%	1/10W
R206	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R207	1-216-035-00	METAL CHIP	270	5%	1/10W
R208	1-216-017-00	METAL CHIP	47	5%	1/10W
R209	1-216-111-00	METAL CHIP	390K	5%	1/10W
R210	1-216-111-00	METAL CHIP	390K	5%	1/10W
R211	1-216-043-00	METAL CHIP	560	5%	1/10W
R212	1-216-035-00	METAL CHIP	270	5%	1/10W
R213	1-216-041-00	METAL CHIP	470	5%	1/10W
R214	1-216-075-00	METAL CHIP	12K	5%	1/10W
R215	1-216-075-00	METAL CHIP	12K	5%	1/10W
R216	1-216-073-00	METAL CHIP	10K	5%	1/10W
R217	1-216-022-00	METAL CHIP	75	5%	1/10W
R218	1-216-075-00	METAL CHIP	12K	5%	1/10W
R219	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R220	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R302	1-216-091-00	METAL CHIP	56K	5%	1/10W
R303	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R304	1-216-075-00	METAL CHIP	12K	5%	1/10W
R305	1-216-078-00	METAL CHIP	16K	5%	1/10W
R306	1-216-049-00	METAL CHIP	1K	5%	1/10W
R307	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R308	1-216-087-00	METAL CHIP	39K	5%	1/10W
R309	1-216-049-00	METAL CHIP	1K	5%	1/10W
R310	1-216-099-00	METAL CHIP	120K	5%	1/10W
R311	1-216-085-00	METAL CHIP	33K	5%	1/10W
R401	1-216-084-00	METAL CHIP	30K	5%	1/10W
R402	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R403	1-216-077-00	METAL CHIP	15K	5%	1/10W
R404	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R405	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R406	1-216-121-00	METAL CHIP	1M	5%	1/10W

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS


Ref.No.	Part No.	Description				
R407	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R410	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R411	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R412	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R451	1-216-045-00	METAL CHIP	680	5%	1/10W	
R452	1-216-001-00	METAL CHIP	10	5%	1/10W	
R453	1-216-007-00	METAL CHIP	18	5%	1/10W	
R454	1-216-023-00	METAL CHIP	82	5%	1/10W	
R501	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R502	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R503	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R504	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R505	1-216-009-00	METAL CHIP	22	5%	1/10W	
R506	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R507	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R508	1-216-023-00	METAL CHIP	82	5%	1/10W	
R509	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R510	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R511	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R512	1-216-035-00	METAL CHIP	270	5%	1/10W	
R551	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R552	1-216-045-00	METAL CHIP	680	5%	1/10W	
R553	1-216-045-00	METAL CHIP	680	5%	1/10W	
R554	1-216-045-00	METAL CHIP	680	5%	1/10W	
R555	1-216-025-00	METAL CHIP	100	5%	1/10W	
R556	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R558	1-216-009-00	METAL CHIP	22	5%	1/10W	
R559	1-216-041-00	METAL CHIP	470	5%	1/10W	
R560	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R561	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R562	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R563	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R564	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R602	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R603	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R604	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R605	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R606	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R607	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R608	1-216-043-00	METAL CHIP	560	5%	1/10W	
R609	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R610	△.1-216-081-00	METAL CHIP	22K	5%	1/10W	
R611	△.1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R612	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R613	1-216-095-00	METAL CHIP	82K	5%	1/10W	
R614	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R616	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R801	1-216-041-00	METAL CHIP	470	5%	1/10W	
R802	1-216-047-00	METAL CHIP	820	5%	1/10W	
R803	1-247-879-00	CARBON	100K	5%	1/6W	
R804	1-216-280-00	METAL CHIP	2.7M	5%	1/8W	
R805	1-216-131-11	METAL CHIP	2.7M	5%	1/10W	
R806	1-202-727-00	SOLID	4.7M	10%	1/2W	
R807	1-216-041-00	METAL CHIP	470	5%	1/10W	
R808	1-216-039-00	METAL CHIP	390	5%	1/10W	
R809	1-216-125-00	METAL CHIP	1.5M	5%	1/10W	
R810	1-216-286-00	METAL CHIP	4.7M	5%	1/8W	
R851	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R853	1-216-049-00	METAL CHIP	1K	5%	1/10W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R854	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R855	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R856	1-216-022-00	METAL CHIP	75	5%	1/10W	
R858	1-216-031-00	METAL CHIP	180	5%	1/10W	
R859	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R860	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R861	1-216-087-00	METAL CHIP	39K	5%	1/10W	
R862	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R863	1-216-131-11	METAL CHIP	2.7M	5%	1/10W	
R864	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R865	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R868	1-216-248-00	METAL CHIP	120K	5%	1/8W	
R869	1-216-132-11	METAL CHIP	3M	5%	1/10W	
R870	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R871	1-216-033-00	METAL CHIP	220	5%	1/10W	
RV151	1-230-941-11	RES, VAR, CARBON (WITH SW)200K				
RV152	1-230-429-11	RES, ADJ, METAL GLAZE 220K				
RV153	1-230-429-11	RES, ADJ, METAL GLAZE 220K				
RV154	1-230-429-11	RES, ADJ, METAL GLAZE 220K				
RV155	1-230-216-00	RES, ADJ, METAL GLAZE 47K				
RV201	1-230-937-11	RES, ADJ, METAL GLAZE 10K				
RV451	1-230-939-11	RES, VAR, CARBON 10K (VOL)				
RV501	1-230-610-11	RES, ADJ, CARBON 5K				
RV502	1-237-149-11	RES, VAR, CARBON 5K				
RV551	1-237-150-11	RES, ADJ, METAL GLAZE 1K				
RV601	△.1-230-610-11	RES, ADJ, CARBON 5K				
RV801	1-230-954-11	RES, ADJ (HIGH VOLTAGE) 4.7M				
RV802	1-230-942-11	RES, ADJ, CARBON 4.7M				
RV803	1-228-999-00	RES, ADJ, CARBON 470K				
RV851	1-230-611-11	RES, ADJ, CARBON 100K				
RV852	1-230-608-11	RES, ADJ, CARBON 50K				
S151	1-570-377-11	SWITCH, SLIDE (BAND)				
S401	1-570-402-11	SWITCH, SLIDE (CONTR)				
S601	1-554-598-00	SWITCH, SLIDE (POWER)				
SP901	1-503-540-11	SPEAKER				
SWF201	1-567-565-11	FILTER, CERAMIC				
T601	1-410-352-11	MICRO INDUCTOR				
T801	△.1-439-370-11	TRANSFORMER ASSY, FLYBACK				

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-463-692-11	(E).....ADAPTOR, AC (AC-650W)
3-329-441-01	(AEP)...CUSHION (LOWER)
3-329-442-01	(AEP)...CUSHION (UPPER)
3-329-482-01	(E).....CUSHION (UPPER)
3-329-483-01	(E).....CUSHION (LOWER)
3-329-447-01	CASE, CARRYING
3-329-450-01	STRAP
3-329-451-01	SHEET (A), PROTECTION
3-329-457-01	SHEET (B), PROTECTION
3-329-476-01	CUSHION, ADAPTOR
3-329-485-01	(E).....INDIVIDUAL CARTON
3-329-488-01	(AEP)...INDIVIDUAL CARTON
3-701-622-00	BAG, POLYETHYLENE
3-703-910-01	(BLK:AEP)...LABEL, COLOR
3-703-913-01	(GRY:AEP)...LABEL, COLOR
3-703-923-01	(WHT:AEP)...LABEL, COLOR
3-760-731-41	(E).....MANUAL, INSTRUCTION
3-760-731-51	(AEP)...MANUAL, INSTRUCTION

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

